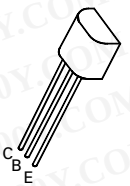
NPN SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTORS

ISSUE 2 – JULY 94

ZTX656
ZTX657

FEATURES

* 300 Volt V_{CEO}
* 0.5 Amp continuous current
* P_{tot}=1 Watt



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	ZTX656	ZTX657	UNIT
Collector-Base Voltage	V_{CBO}	200	300	V
Collector-Emitter Voltage	V_{CEO}	200	300	V
Emitter-Base Voltage	V_{EBO}	5		V
Peak Pulse Current	I_{CM}	1		A
Continuous Collector Current	I_C	0.5		A
Power Dissipation at T_{amb}=25°C	P_{tot}	1		W
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +200		°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	ZTX656		ZTX657		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	200		300		V	I_C=100µA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	200		300		V	I_C=10mA, I_B=0*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		5		V	I_E=100µA, I_C=0
Collector Cut-Off Current	I_{CBO}		100		100	nA nA	V_{CB}=160V, I_E=0 V_{CB}=200V, I_E=0
Emitter Cut-Off Current	I_{EBO}		100		100	nA	V_{EB}=3V, I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5		0.5	V	I_C=100mA, I_B=10mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1		1	V	I_C=100mA, I_B=10mA*
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		1		1	V	IC=100mA, V_{CE}=5V*
Static Forward Current Transfer Ratio	h_{FE}	50 40		50 40			I_C=100mA, V_{CE}=5V I_C=10mA, V_{CE}=5V
Transition Frequency	f_T	30		30		MHz	I_C=10mA, V_{CE}=20V f=20MHz

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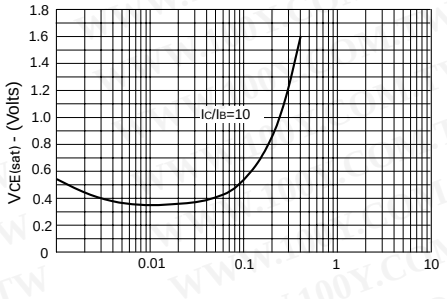
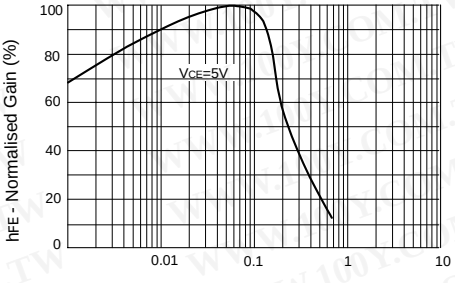
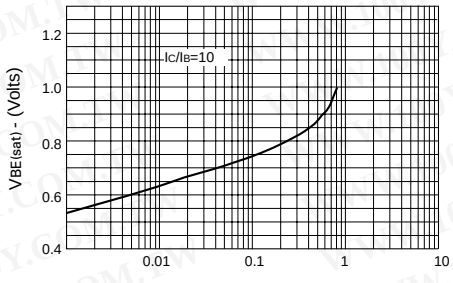
TYPICAL CHARACTERISTICS



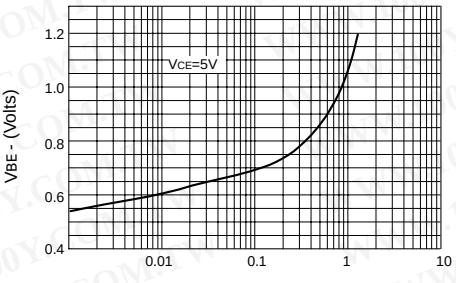
VCE(sat) v IC



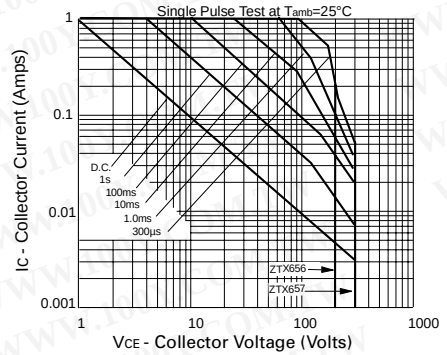
hFE v IC



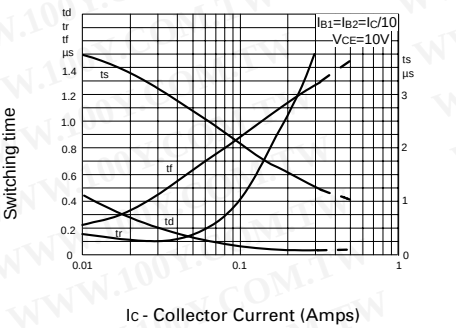
VBE(sat) v IC



VBE(on) v IC



Safe Operating Area



Switching Speeds